

WHAT IS CLAIMED IS:

1. An electrode for projection welding comprising
a metallic main body,
an end cover of metal attached to the end of a main body and
having a through hole,
and a guide sleeve of insulation material received in said
main body and having a part receiving hole communicating with
the through hole in the end cover,
said electrode having a cooling passage for fluid to cool
said guide sleeve.

2. An electrode for projection welding as set forth in Claim
1, wherein said guide sleeve has a throughgoing hole consisting
of a major diameter section and a minor diameter section, a
container internally holding a magnet is slidably received in
the major diameter section, a guide pin of iron is slidably
received in the minor diameter section, the end of said
container with the magnet exposed being joined to said guide
pin, a compression coil spring acts on the other end of said
container, said minor diameter section being used as said
receiving hole.

3. An electrode for projection welding as set forth in Claim
1 or 2, wherein said fluid is water, an said cooling passage
extends circumferentially of the main body and has an inlet port
and an outlet port for cooling water.

4. An electrode for projection welding as set forth in Claim 1, 2, or 3, wherein said cooling passage is in the form of an annular groove formed around the outer periphery of said guide sleeve.

5. An electrode for projection welding as set forth in any one of Claims 1 to 4, wherein a magnet is inserted in said guide sleeve, so that a part inserted in the receiving hole in the guide sleeve from the through hole in said end cover is attracted by the magnet, whereby the part is held to the electrode.

6. An electrode for projection welding as set forth in Claim 5, wherein a detection current for parts detection flows through at least said magnet, said part, said end cover, and said main body.

7. An electrode for projection welding as set forth in Claim 2, wherein an electric wire is connected to a washer receiving the end of said compression coil spring opposite to said container, an insulation cup is interposed between the washer and the main body, and an electricity-passing circuit is established with a path including the washer, compression coil spring, container, guide pin, part, end cover and main body.

8. An electrode for projection welding as set forth in any one of Claims 1 to 7, wherein an air piping and a drain hole

communicating with each other are provided for blowing compressed air into the main body.

9. An electrode for projection welding as set forth in Claim 1, wherein said fluid is air, which is supplied from an inlet formed in the main body and is discharged outside through an air passage formed in the guide sleeve, a clearance between the guide sleeve and the end cover, and the through hole in the end cover.